

Quick Start Guide: NatureMetrics Cassette

Included with your eDNA Sampler

- ❖ DOT Control Pendant
- ❖ USB Flash Drive (Docs. & Software Install)
- ❖ Serial to USB Converter Cable
- ❖ Mounting Cradles
- ❖ Tools/Spares Kit
- ❖ Reagent Kit (Purchased Separately)
- ❖ Y-Splitter Cable (Power & Comms.)
- ❖ Wall Outlet Adapter Cable

User-Supplied Equipment

- ❖ Laptop or PC with USB port
- ❖ Wall Outlet Power (Optional)

Recommended Accessories

- ❖ DOT Battery Pack
- ❖ Replacement Sample Filters
- ❖ Extra Filter Cassette & Transport Kit

Cable Guide

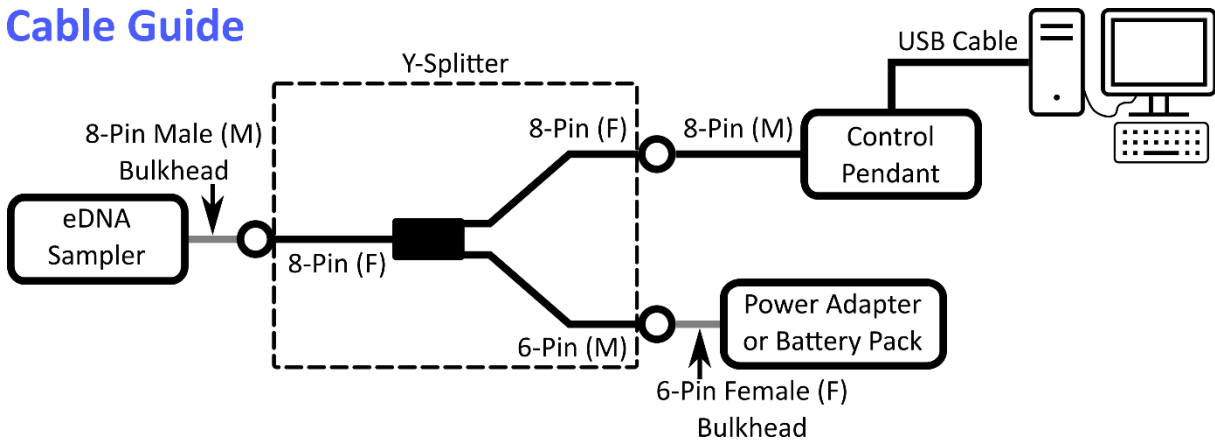


Figure 1: Cable Guide

Table 1: Fluid consumption per step. Steps 1 – 5 occur during Sampling.

Step(s)	Function	Milli-Q	HCl	RNALater	Waste	SW
C1-C2	Benchtop Cleaning & Priming (x1)	231 mL	30 mL	0 mL	0 mL	0 mL
S1-S5	Sampling (Totals for 9 Samples)	162 mL	144 mL	84 mL	84 mL	Variable
Total: One Cassette with Cleaning & Priming		393 mL	174 mL	84 mL	84 mL	Variable

! WARNING

Deep-Rated eDNA Samplers must always be connected to power when deployed beyond 20 m, or when subjected to a change in depth beyond 20 m.

Physical Setup: Step-by-Step Instructions from Unboxing

Upon shipment, the eDNA Sampler is loaded with nine (9) cleaning adapters. These adapters are used to clean the eDNA Sampler and Cassette before fresh filters are installed.

- 1) Locate flat working surface with enough space to lay the eDNA Sampler horizontally
- 2) Locate Mounting Cradles (x2). Place mounting cradles on working surface. Note that cradles are labelled.
- 3) Place eDNA Sampler onto Mounting Cradles such that each cradle supports the labelled section.
- 4) Locate Y-Splitter Cable. Connect Y-Splitter Cable to Sampler (note above diagram in **Figure 1**):
 - a. Separate Reagent Case from Sampler Body.
 - b. Remove blanking plug with Red Locking Sleeve from Sampler to expose 8-pin connector (male).
 - c. Locate the large hole in the lid of the Reagent case.
 - d. Locate the single-cabled end of the Y-Splitter (8-Pin Female). Feed cable through hole of lid.
 - e. Plug cable into 8-pin male connector. The Y-Splitter body should be outside the reagent case.
- 5) Install each of the four (4) fluid reservoirs (sold-separately). Refer to the user manual for fluid installation [**Section 3.2.1**].
 - a. For each reservoir, remove green cap. Remove clear cap from purple valve. **DO NOT REMOVE PURPLE LUER FITTING**. Attached purple fitting to corresponding port of Sampler [**remove red plug from Sampler if applicable**]. Tighten with IDEX Wrench (Spares Kit)
- 6) Re-Install Reagent Case onto Sampler Body.
- 7) Connect 8-Pin Female Cable of Y-Splitter to DOT Control Pendant
- 8) Connect Control Pendant to PC
 - a. Locate Serial to USB converter cable. Plug cable into Control Pendant. Screw to secure.
 - b. Connect USB end of Serial to USB cable into laptop / PC running windows.
- 9) Connect eDNA Sampler to Power Source (wall power or battery). See instruction manual for wall power. [**Section 4.1**]
 - a. Remove blanking plug from DOT Battery Pack to expose 6-pin female connector.
 - b. Plug 6-pin male cable from Y-Splitter into DOT Battery Pack. Secure with locking sleeve.
- 10) On PC, open DOT eDNA Sampler GUI. Connect to instrument. [Note, on first connection, an internet connection may be required to download drivers for the Prolific PL2303GT Serial to USB Converter. Refer to tag on cable.]
- 11) Update consumables according to the fluid volumes provided with your Reagent Kit.
- 12) Run the Benchtop Cleaning Process (Cleaning Tab - Clean Sampler & Cassette, Step 2 in GUI).
- 13) Upon completion, disconnect Cassette from Sampler. For each filter spot:
 - a. Remove cleaning adapter from cassette. Load fresh NatureMetrics Filter (requires Luer Slip adapter from previously-removed cleaning adapter). Filters 1, 2, 4, 6, and 8 must be installed first. Refer to Operation Manual for details if required. [**Section 3.2.2**]
- 14) Install fully-loaded filter cassette onto Sampler. Click New Cassette (Clean Sampler & Cassette, Step 3)
- 15) Run System Prime (Clean Sampler & Cassette, Step 4) to purge air from system.

Program Sampler for Deployment

- 1) Ensure previous steps are followed.
- 2) Review Sampler Clock (displayed in bottom left, updated in Status – Clock tab). Update if necessary.
- 3) In Status – Sampling, set the desired sample volume targets for each filter.
- 4) In Automated Sampling, set Trigger Mode (Trigger by Time or Trigger by Depth [Deep-Rated units only])
- 5) Set the nine (9) trigger conditions for Filters 1 – 9 in chronological order. Refer to user manual [**Section 5.4**]. Ensure that the first filter trigger allows for sufficient time to deploy the Sampler.
- 6) Ensure Trigger Index (“Next Trigger to Sample”) is set to 1; otherwise, prior Filters will be skipped.
- 7) When all nine trigger conditions have been set, click Activate. Automated Sampling is now enabled.
- 8) When ready to deploy, disconnect Control Pendant from Y-Splitter. Plug exposed end of Y-Splitter.